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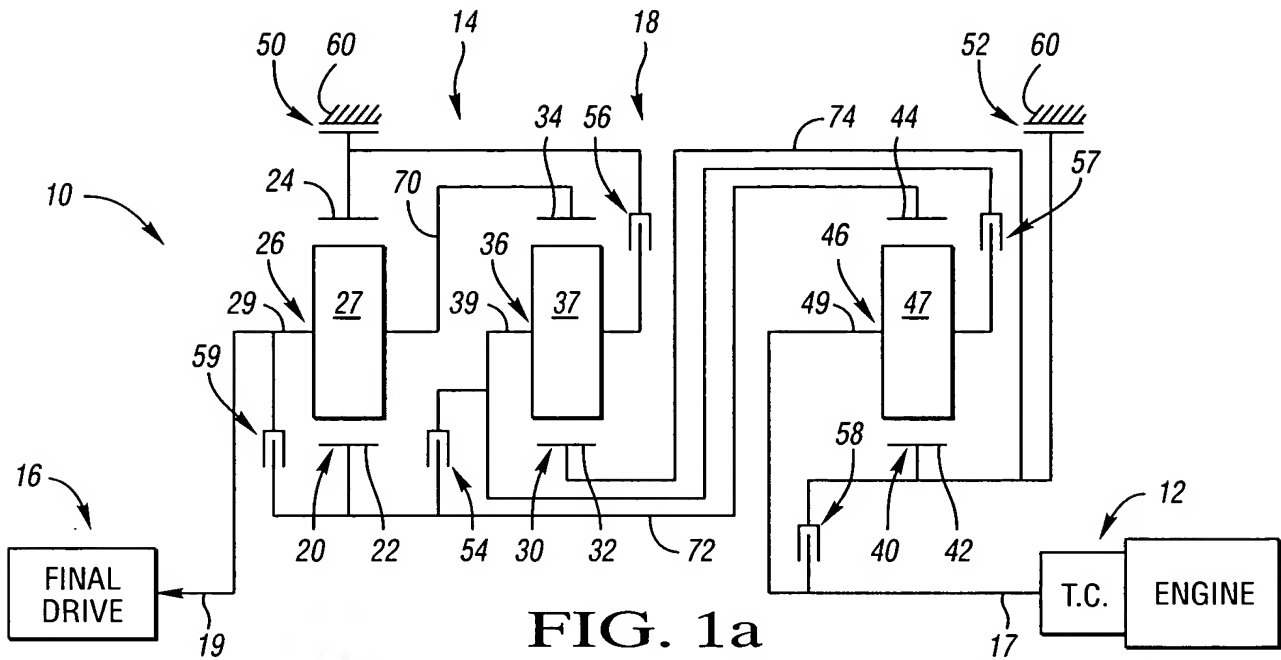


FIG. 1a

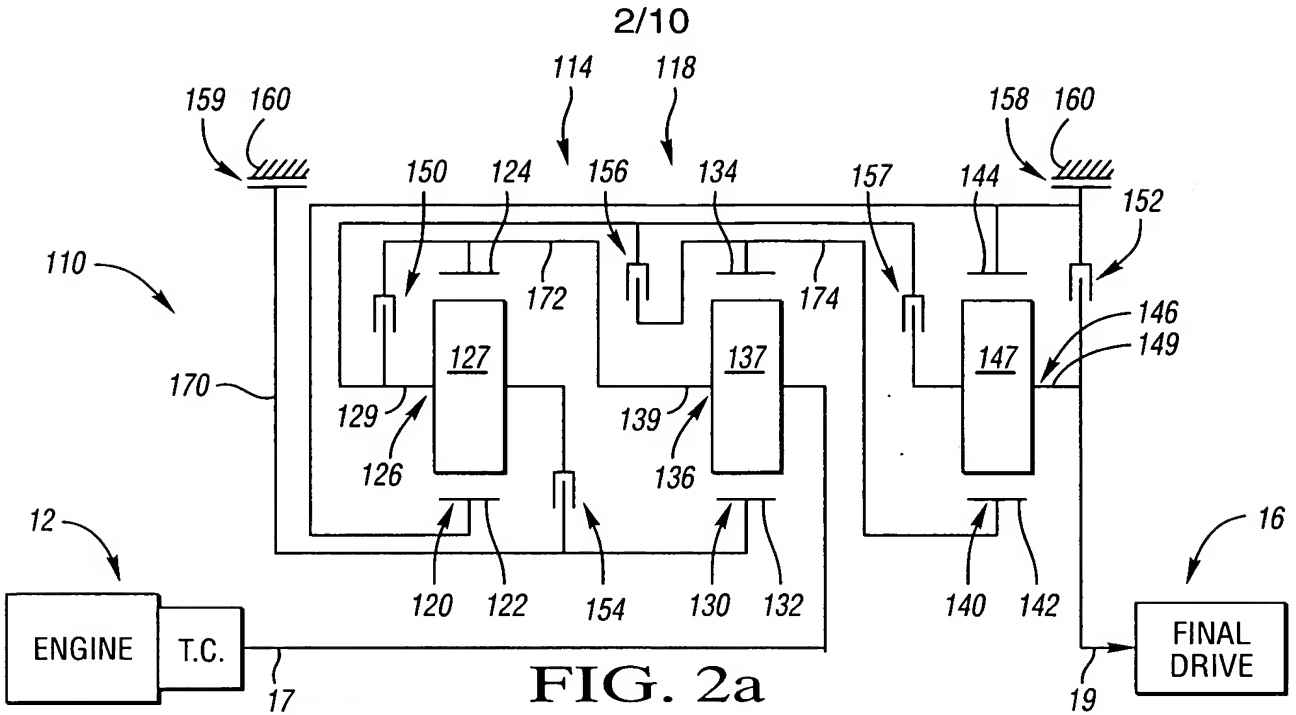
FIG. 1b

	RATIOS	50	52	54	56	57	58	59
REVERSE	-6.55	X				X		
NEUTRAL	0.00	X						
1	6.70	X		X				
2	3.93	X					X	
3	2.68	X	X					
4	1.73	X			X			
5	1.18		X		X			
6	1.00				X	X		
7	0.75		X			X		
8	0.68		X					X
9	0.51		X	X				

(X = ENGAGED CLUTCH)

RING GEAR TOOTH RATIO:  $\frac{N_{R1}}{N_{S1}} = 2.92$ ,  $\frac{N_{R2}}{N_{S2}} = 2.98$ ,  $\frac{N_{R3}}{N_{S3}} = 2.15$

RATIO SPREAD	13.14
RATIO STEPS	
REV/1	-0.98
1/2	1.71
2/3	1.46
3/4	1.55
4/5	1.46
5/6	1.18
6/7	1.33
7/8	1.09
8/9	1.33



**FIG. 2b**

	RATIOS	150	152	154	156	157	158	159
REVERSE	-2.00			X				X
NEUTRAL	0.00						X	
1	4.69				X		X	
2	2.49			X			X	
3	2.11						X	X
4	1.66					X	X	
5	1.24					X		X
6	1.00	X				X		
7	0.89	X						X
8	0.75		X					X
9	0.60				X			X

(X = ENGAGED CLUTCH)

RING GEAR / SUN GEAR TOOTH RATIO:  $\frac{N_{R1}}{N_{S1}} = 1.51$ ,  $\frac{N_{R2}}{N_{S2}} = 2.97$ ,  $\frac{N_{R3}}{N_{S3}} = 1.86$

RATIO SPREAD	7.81
RATIO STEPS	
REV/1	-0.43
1/2	1.89
2/3	1.18
3/4	1.27
4/5	1.34
5/6	1.24
6/7	1.12
7/8	1.19
8/9	1.25

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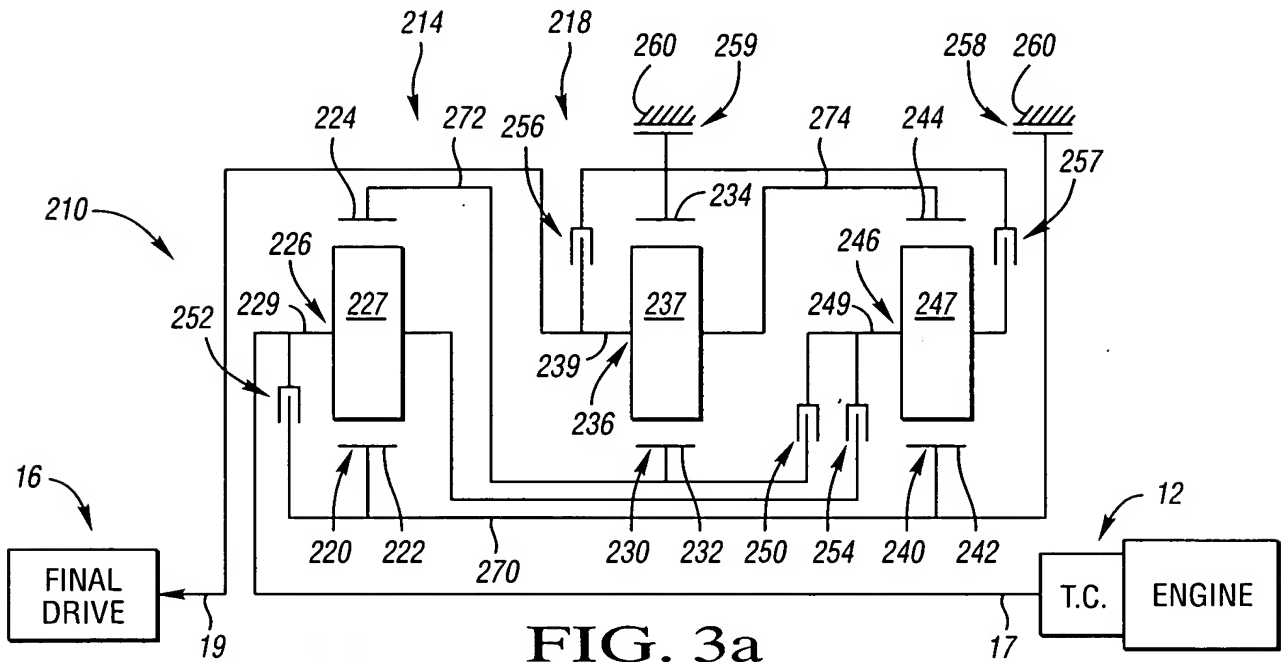


FIG. 3a

FIG. 3b

	RATIOS	250	252	254	256	257	258	259
REVERSE	-3.97			X				X
NEUTRAL	0.00							X
1	7.10	X						X
2	4.00		X					X
3	2.58						X	X
4	1.54					X		X
5	1.14					X	X	
6	1.00				X	X		
7	0.74			X			X	
8	0.64				X		X	
9	0.48	X					X	

(X = ENGAGED CLUTCH)

RING GEAR TOOTH RATIO:  $\frac{N_{R1}}{N_{S1}} = 1.82$ ,  $\frac{N_{R2}}{N_{S2}} = 3.00$ ,  $\frac{N_{R3}}{N_{S3}} = 2.91$

RATIO SPREAD	14.79
RATIO STEPS	
REV/1	-0.56
1/2	1.78
2/3	1.55
3/4	1.67
4/5	1.36
5/6	1.14
6/7	1.34
7/8	1.15
8/9	1.33

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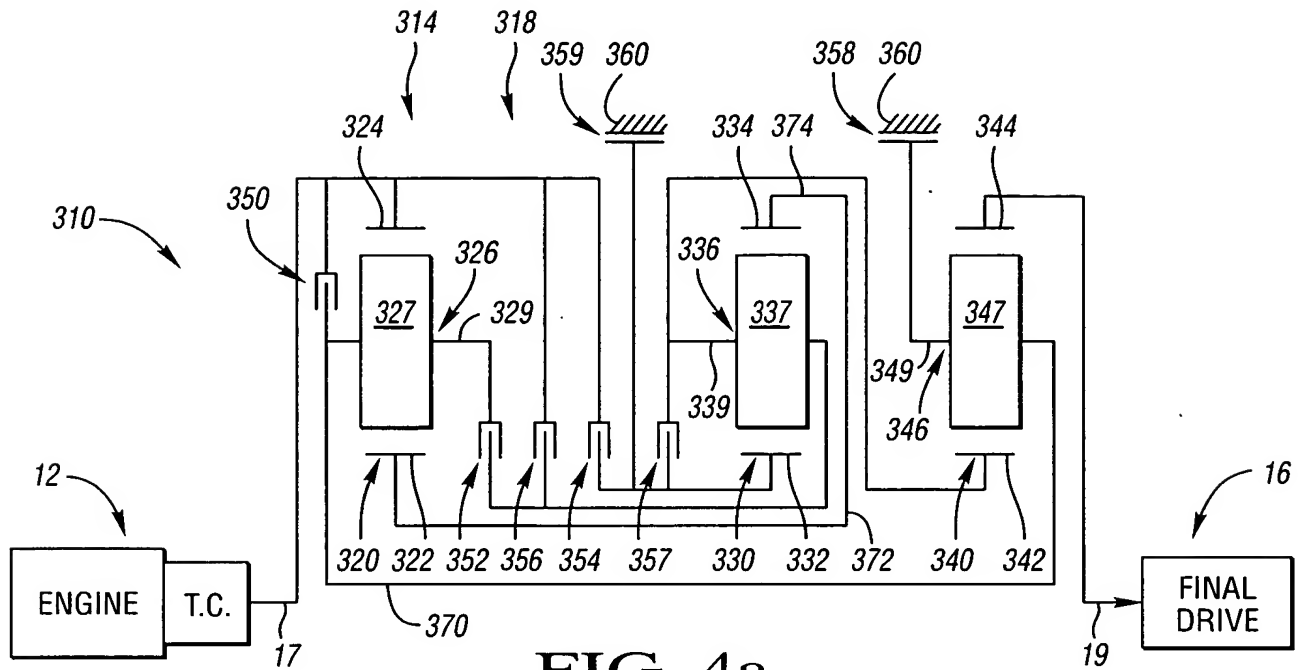


FIG. 4a

FIG. 4b

	RATIOS	350	352	354	356	357	358	359
REVERSE	-3.02				X		X	
NEUTRAL	0.00						X	
1	4.13			X			X	
2	2.90						X	X
3	2.01					X	X	
4	1.25					X		X
5	1.00	X				X		
6	0.91	X						X
7	0.81				X			X
8	0.70		X					X

(X = ENGAGED CLUTCH)

$\frac{\text{RING GEAR}}{\text{SUN GEAR}}$  TOOTH RATIO:  $\frac{N_{R1}}{N_{S1}} = 1.50$ ,  $\frac{N_{R2}}{N_{S2}} = 2.25$ ,  $\frac{N_{R3}}{N_{S3}} = 3.02$

RATIO SPREAD	5.86
RATIO STEPS	
REV/1	-0.73
1/2	1.42
2/3	1.44
3/4	1.61
4/5	1.25
5/6	1.10
6/7	1.12
7/8	1.15

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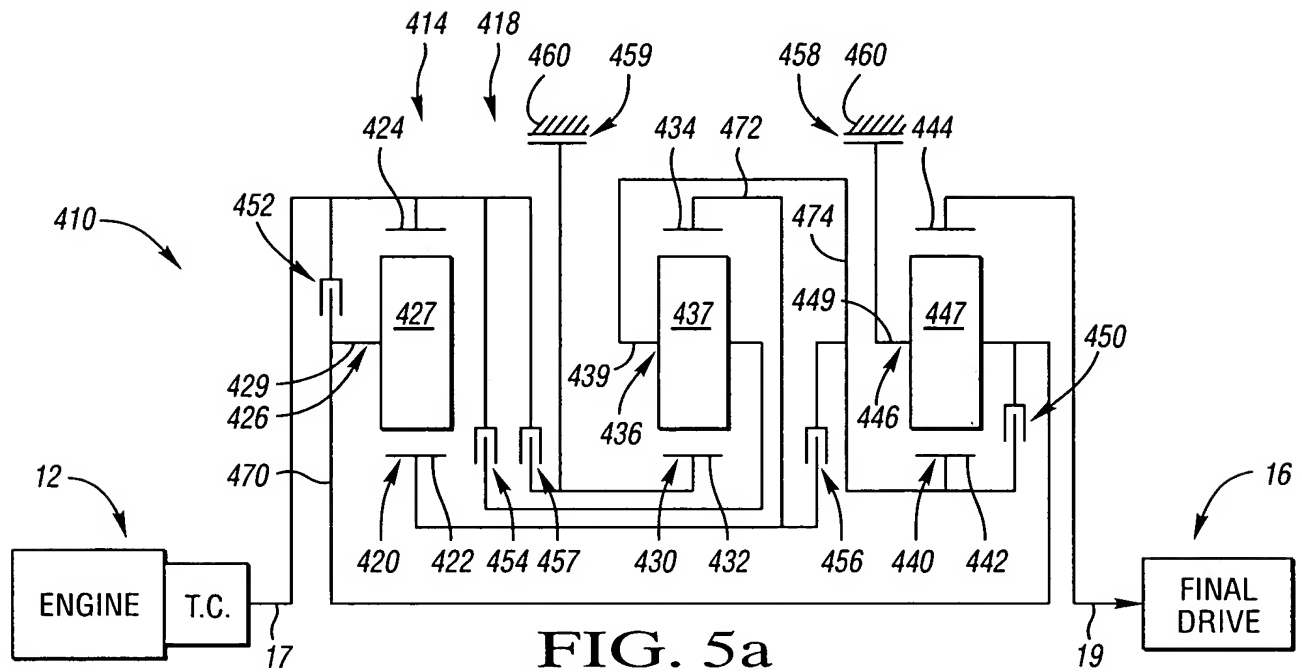


FIG. 5a

FIG. 5b

	RATIOS	450	452	454	456	457	458	459
REVERSE	-2.93			X			X	
NEUTRAL	0.00						X	
1	3.97					X	X	
2	2.80						X	X
3	1.94				X		X	
4	1.24				X			X
5	1.00		X		X			
6	0.91		X					X
7	0.81			X				X
8	0.71	X						X

(X = ENGAGED CLUTCH)

RING GEAR TOOTH RATIO:  $\frac{N_{R1}}{N_{S1}} = 2.92$ ,  $\frac{N_{R2}}{N_{S2}} = 1.51$ ,  $\frac{N_{R3}}{N_{S3}} = 2.25$

RATIO SPREAD	5.64
RATIO STEPS	
REV/1	-0.74
1/2	1.42
2/3	1.44
3/4	1.57
4/5	1.24
5/6	1.10
6/7	1.12
7/8	1.14

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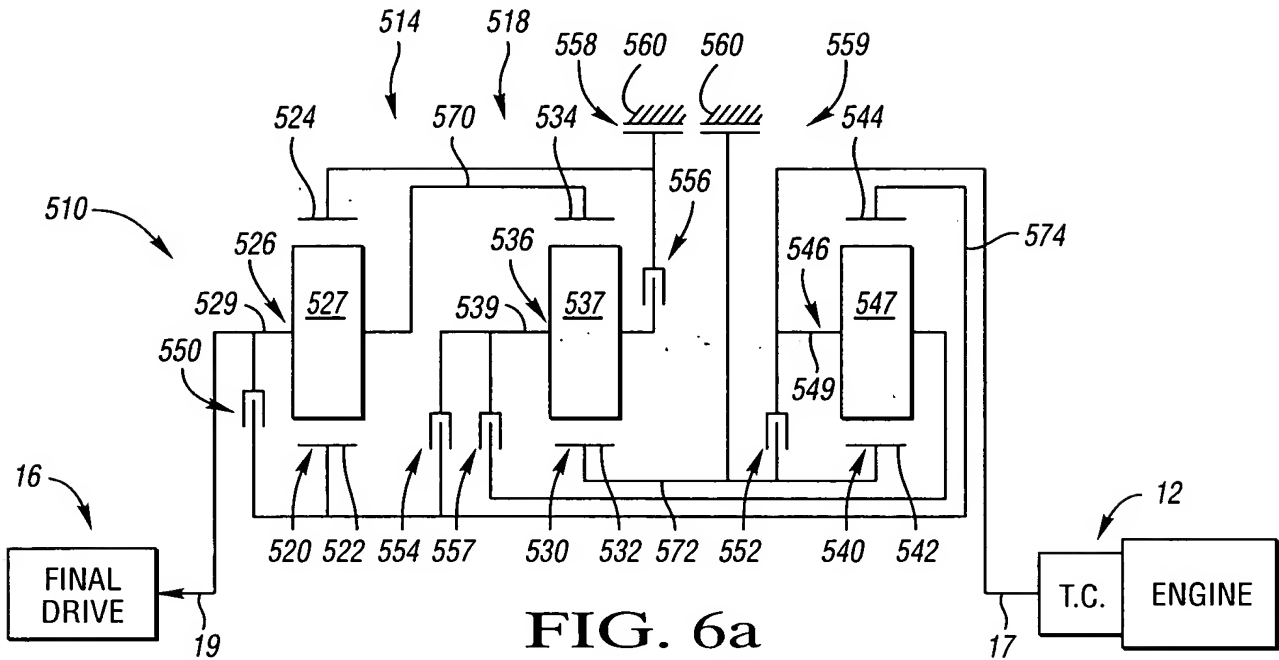


FIG. 6a

FIG. 6b

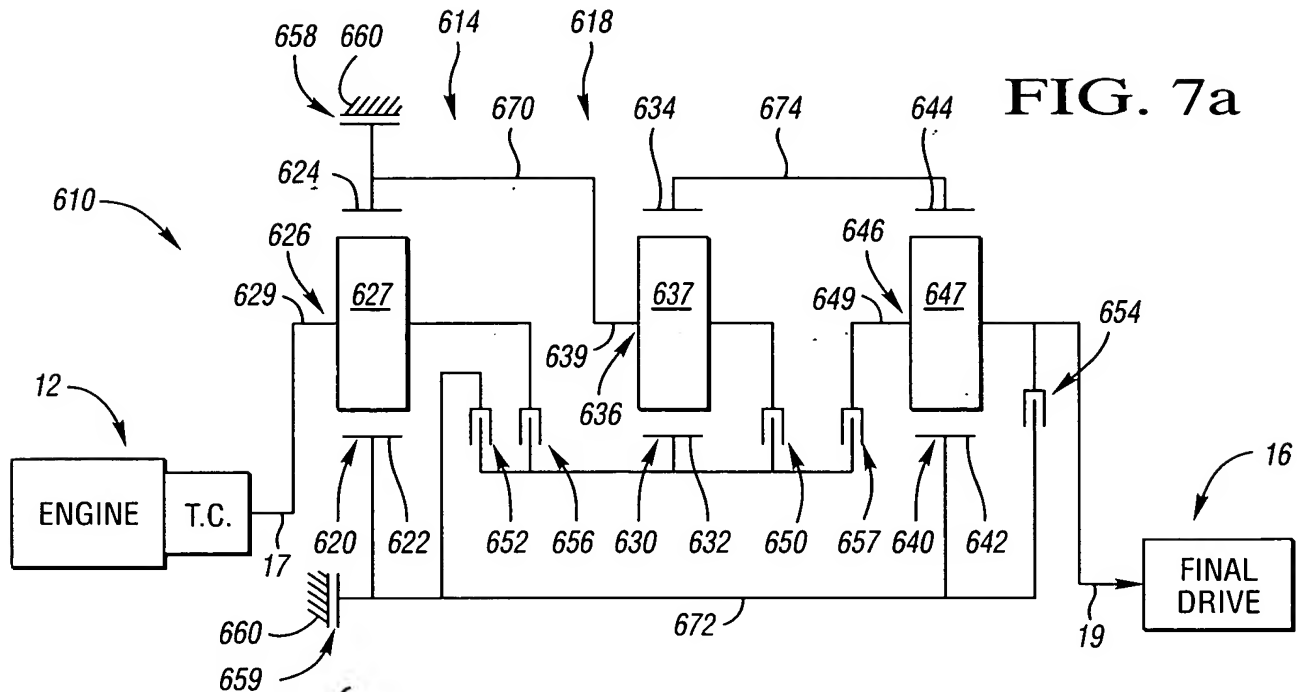
	RATIOS	550	552	554	556	557	558	559
REVERSE	-11.55					X	X	
NEUTRAL	0.00						X	
1	6.49			X			X	
2	2.78						X	X
3	1.91				X		X	
4	1.23				X			X
5	1.00		X		X			
6	0.75					X		X
7	0.71	X						X
8	0.53			X				X

(X = ENGAGED CLUTCH)

RING GEAR TOOTH RATIO:  $\frac{N_{R1}}{N_{S1}} = 2.92$ ,  $\frac{N_{R2}}{N_{S2}} = 2.98$ ,  $\frac{N_{R3}}{N_{S3}} = 2.42$

RATIO SPREAD	12.23
RATIO STEPS	
REV/1	-1.78
1/2	2.33
2/3	1.46
3/4	1.55
4/5	1.23
5/6	1.33
6/7	1.06
7/8	1.33

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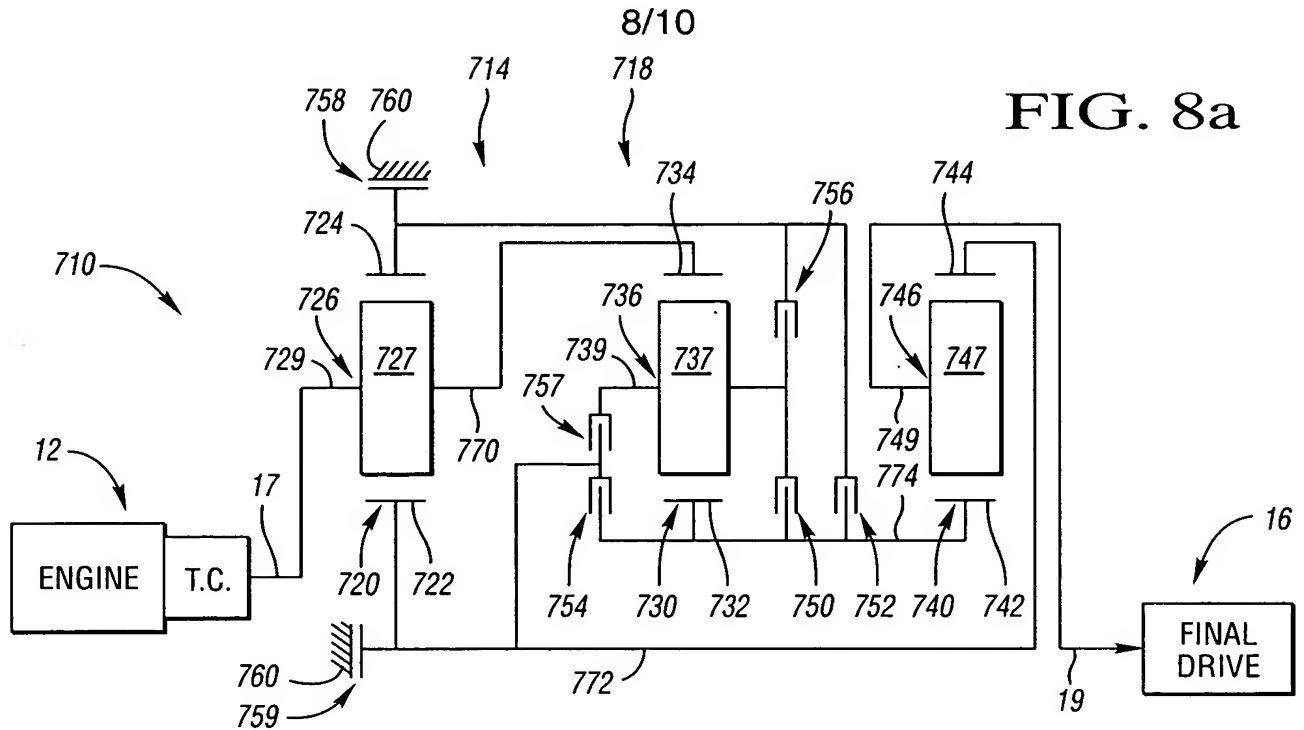
**FIG. 7b**

	RATIOS	650	652	654	656	657	658	659
REVERSE	-2.31		X				X	
NEUTRAL	0.00						X	
1	4.69				X		X	
2	2.23					X	X	
3	1.56	X					X	
4	1.00	X	X					
5	0.81	X						X
6	0.73					X		X
7	0.66				X			X
8	0.51		X					X
9	0.40			X			X	

(X = ENGAGED CLUTCH)

RING GEAR TOOTH RATIO:  $\frac{N_{R1}}{N_{S1}} = 1.51$ ,  $\frac{N_{R2}}{N_{S2}} = 1.74$ ,  $\frac{N_{R3}}{N_{S3}} = 2.91$

RATIO SPREAD	11.73
RATIO STEPS	
REV/1	-0.49
1/2	2.10
2/3	1.43
3/4	1.56
4/5	1.24
5/6	1.10
6/7	1.11
7/8	1.28
8/9	1.28



	RATIOS	750	752	754	756	757	758	759
REVERSE	-2.59					X		X
NEUTRAL	0.00							X
1	3.91	X						X
2	2.35		X					X
3	1.47				X			X
4	1.00	X			X			
5	0.68				X		X	
6	0.54		X				X	
7	0.47	X					X	
8	0.40			X			X	
9	0.32					X	X	

(X = ENGAGED CLUTCH)

$$\frac{\text{RING GEAR}}{\text{SUN GEAR}} \text{ TOOTH RATIO: } \frac{N_{R1}}{N_{S1}} = 1.51, \frac{N_{R2}}{N_{S2}} = 1.51, \frac{N_{R3}}{N_{S3}} = 2.91$$

RATIO SPREAD	12.22
RATIO STEPS	
REV/1	-0.66
1/2	1.66
2/3	1.60
3/4	1.47
4/5	1.48
5/6	1.26
6/7	1.14
7/8	1.14
8/9	1.25



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FIG. 9a

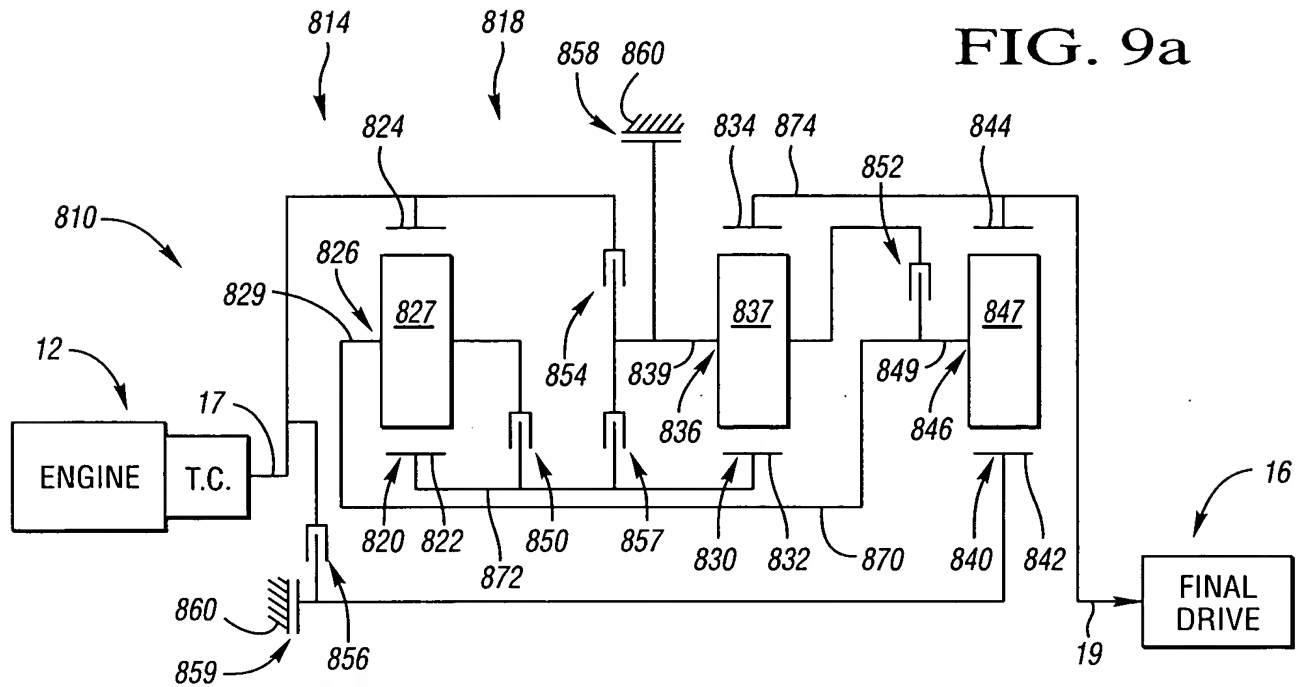


FIG. 9b

	RATIOS	850	852	854	856	857	858	859
REVERSE	-2.76	X					X	
NEUTRAL	0.00						X	
1	5.77				X		X	
2	3.03						X	X
3	1.84		X				X	
4	1.24		X					X
5	1.00		X	X				
6	0.86			X				X
7	0.71	X						X
8	0.52					X		X

(X = ENGAGED CLUTCH)

RING GEAR  
SUN GEAR TOOTH RATIO:  $\frac{N_{R1}}{N_{S1}} = 1.51$ ,  $\frac{N_{R2}}{N_{S2}} = 2.76$ ,  $\frac{N_{R3}}{N_{S3}} = 2.50$

RATIO SPREAD	11.01
RATIO STEPS	
REV/1	-0.48
1/2	1.91
2/3	1.65
3/4	1.48
4/5	1.24
5/6	1.16
6/7	1.21
7/8	1.36

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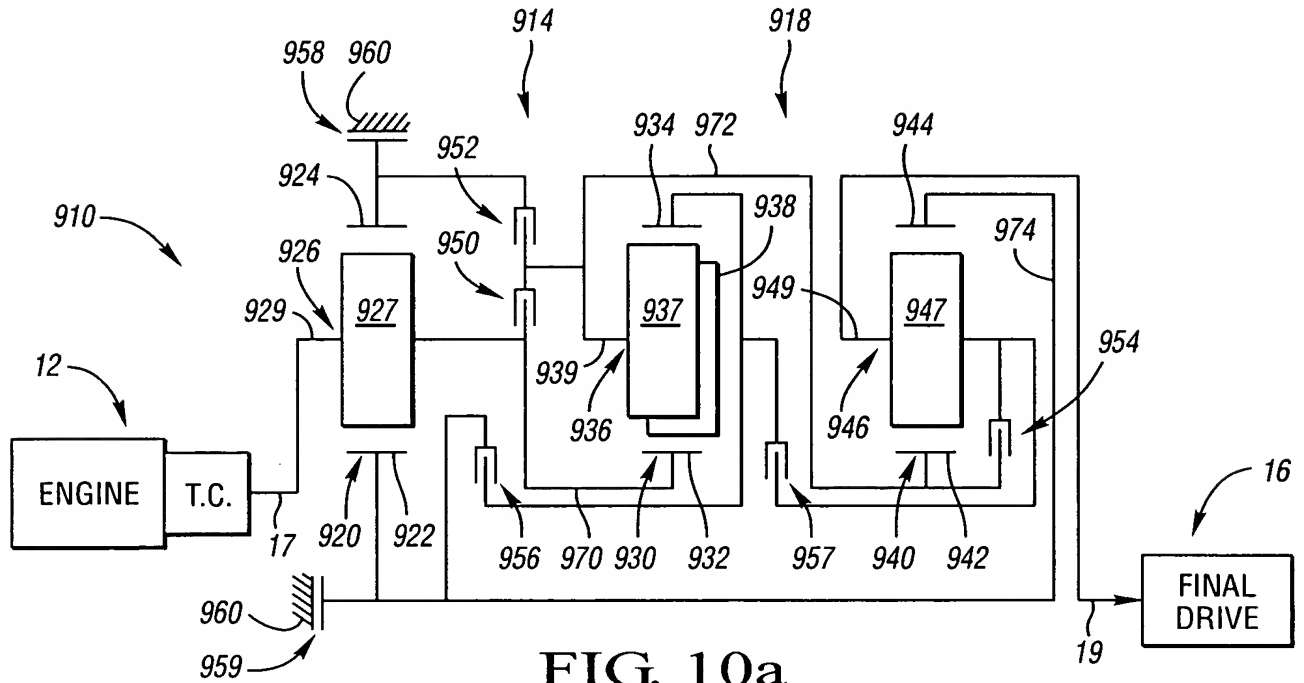


FIG. 10a

FIG. 10b

	RATIOS	950	952	954	956	957	958	959
REVERSE 2	-7.13				X			X
REVERSE 1	-3.51					X		X
NEUTRAL	0.00							X
1	2.72	X						X
2	1.63		X					X
3	1.00	X	X					
4	0.63		X				X	
5	0.51	X					X	
6	0.40				X		X	
7	0.37			X			X	
8	0.34					X	X	

(X = ENGAGED CLUTCH)

RING GEAR TOOTH RATIO:  $\frac{N_{R1}}{N_{S1}} = 2.62$ ,  $\frac{N_{R2}}{N_{S2}} = 2.51$ ,  $\frac{N_{R3}}{N_{S3}} = 1.72$

RATIO SPREAD	7.98
RATIO STEPS	
REV/1	-1.29
1/2	1.66
2/3	1.63
3/4	1.58
4/5	1.23
5/6	1.28
6/7	1.08
7/8	1.08